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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,588	06/30/2003	Avigdor Levanon	10793/70	5130
<div>26646 7590 07/26/2007</div> <div>KENYON & KENYON LLP</div> <div>ONE BROADWAY</div> <div>NEW YORK, NY 10004</div>				
			<div>EXAMINER</div> <div>GAMBEL, PHILLIP</div>	
			<div>ART UNIT</div> <div>1644</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>07/26/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/611,588

Applicant(s)

LEVANON ET AL.

Examiner

Phillip Gambel

Art Unit

1644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 28-84 is/are pending in the application.
- 4a) Of the above claim(s) 19-45, 47-81 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 46, 82 and 83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment, filed 12/04/06, has been entered.

Claims 1-85 are pending.

2. Applicant's election of Group I (claims 1-33, 46-48, 82-83 and 85) and the species of PSGL-1 specific antibodies not conjugated or complexed with an agent; an antibody comprising SEQ IDNO: 1 and an epitope specificity comprising at least one sulfated moiety in the Response to Restriction Requirement, filed 12/04/06 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 19-45, 47-81 and 84 have been withdrawn from consideration as being drawn to the nonelected inventions and species.

In response to applicant's comment that claims 80-81 were not assigned to a Group in the previous Restriction Requirement, mailed 10/04/2006,

applicant is reminded that claims 80-81 are directed to the "use" of a composition.

"Use" claims are non-statutory under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example Ex parte Dunki, 153 USPQ 678 (Bd. App. 1967) and Clinical Products, Ltd v. Brenner, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

See MPEP 2173.05(q).

Therefore, claims 80-81 have been withdrawn from consideration as being drawn to non-statutory subject matter

Claims 1-18, 46, 82, 83, and 85 are under consideration and being acted upon as they read on the elected species of unconjugated anti-PSGL-1 antibodies.

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3. If applicant desires priority under 35 U.S.C. 120 based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Also, see United States Patent and Trademark Office OG Notices: 1268 OG 89 (18 March 2003).

Applicant should amend page one (1) of the specification to indicate priority to USSN 60/393,491.

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Furthermore, applicant is invited to indicate whether applicant was timely in claiming the benefit of priority to previously filed priority document USSN 60/393,491.

If so, then applicant should amend the first line of the specification accordingly.

If not, applicant may have to file a Petition as indicated above.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. The application is required to be reviewed and all spelling, TRADEMARKS, and like errors corrected. Appropriate corrections are required.

Trademarks should be capitalized or accompanied by the ® or ™ symbol wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the trademarks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate corrections are required

6. Objections:

A) Claims 6 and 9 are objected to because the antecedent basis of the "wherein" clauses as written could be interpreted to read on the "an epitope of PSGL-1" rather than the antibody.

Applicant should amend the claims to clearly indicates that the CDRs and SEQ ID NOS. read on the antibody or fragments thereof and not "an epitope of PSGL-1".

B) Claim 85 is objected to as it is dependent on a non-elected claim.

Applicant should amend the claim as an independent claim.

7. Claim 18 and 83 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) Claim 18 is indefinite in the recitation of "the antibody or fragment thereof of claim 1, wherein the antibody or fragment thereof binds to an epitope on a lipid, carbohydrate, peptide, glycolipid, glycoprotein, lipoprotein, and/or lipopolysaccharide molecule"

because it is not clear whether applicant is claiming an antibody that binds an epitope of PSGL-1 or attempting to claim an epitope distinct from that expressed by PSGL-1,

since the claim does not refer back to PSGL-1 as the "lipid, carbohydrate, peptide, glycolipid, glycoprotein, lipoprotein, and/or lipopolysaccharide".

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Applicant is invited to clarify the metes and bounds of this claim.

B) Claim 83 is indefinite in the recitation of "cell rolling" as a disease. The ordinary artisan would not have classified the process by which cells move as a disease at the time the invention was made.

C) Applicant is reminded that the amendment must point to a basis in the specification so as not to add any new matter. See MPEP 714.02 and 2163.06

8. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-18, 46, 82, 83 and 85 are rejected under 35 U.S.C. § 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention.

A) Anti-PSGL-1 Antibodies lacking an entire variable heavy of light chain or all six (6) CDRs

With respect to claims that recite anti-PSGL-1 antibodies and antigen-binding fragments that comprise a particular CDR (e.g., "wherein the antibody comprise one heavy chain CDR") or certain fragments (e.g., "fragments thereof is a substantially circular or looped peptide or polypeptide"),

the instant claims encompass anti-PSGL-1 antibodies that do not comprise sufficient structural elements to provide for antibodies to provide for the antigen specificity of PSGL-1 as broadly encompassed by the claimed invention.

It has been well established in the art that the formation of an intact antigen-binding site generally requires the association of the complete heavy and light chain variable regions of a given antibody, each of which consists of three CDRs which provide the majority of the contact residues for the binding of the antibody to its target epitope. The amino acid sequences and conformations of each of the heavy and light chain CDRs are critical in maintaining the antigen binding specificity and affinity, which is characteristic of the parent immunoglobulin. All of the heavy and light chain CDRs should be in their proper order and in the context of framework sequences which maintain their required conformation in order to provide a binding molecule having antigen-binding function and that proper association of heavy and light chain variable regions is required in order to form functional antigen binding sites.

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Even minor changes in the amino acid sequences of the heavy and light variable regions, particularly in the CDRs, may dramatically affect antigen-binding function as evidenced by Rudikoff et al (Proc Natl Acad Sci USA 79: 1979-1983 (1982). Rudikoff et al. teach that the alteration of a single amino acid in the CDR of a phosphocholine-binding myeloma protein resulted in the loss of antigen-binding function.

Single amino changes to either a CDR or even in certain circumstances to the framework can result in decrease affinity of antigen or even ablation of antibody binding and specificity. Also, see Colman, Research in Immunology 145: 33-36, 1994.

While being enabling for the PSGL-1-specific antibodies and antigen binding fragments thereof comprising the claimed sequences derived from the disclosed "L31 or L32 antibodies" comprising an entire variable heavy or light chain or all six (6) CDRs, as set forth in the instant claims and disclosed in the specification as filed, does not reasonably provide enablement for

any "PSGL-1-specific antibody" or "antibody fragments thereof" broadly encompassed by the claimed invention.

In addition, applicant has not provided sufficient direction and guidance as to those antibody fragments that are "substantially circular or looped peptides or polypeptides" that provide sufficient structural elements (e.g., CDRs) to provide the appropriate specificity of anti-PSGL-1 antibodies consistent with the disclosed utilities of anti-PSGL-1 antibodies (e.g., see pages of the instant specification).

It is unlikely that any "PSGL-1 antibody or fragment thereof" broadly encompassed by the claimed invention as defined by the claims will have the required binding function for PSGL-1 and, in turn, have the required therapeutic properties encompassed by the "pharmaceutical compositions" encompassed by the claimed invention.

The specification provides insufficient direction and guidance regarding how to produce any "PSGL-1 antibodies and fragments thereof" broadly encompassed by the claimed invention.

Undue experimentation would be required to produce the invention commensurate with the scope of the claims from the instant disclosure alone. One of skill in the art would neither expect nor predict the appropriate functioning of the claimed PSGL-1-specific antibodies and fragments thereof as broadly as is claimed. Therefore, in view of the lack of guidance in the specification and in view of the discussion above one of skill in the art would be required to perform undue experimentation in order to practice the claimed invention.

Reasonable correlation must exist between the scope of the claims and scope of enablement set forth.

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Without sufficient guidance, the breadth of incomplete structures defined in the claimed PSGL-1-specific antibodies and still provide or maintain sufficient or the claimed activity would have been unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue.

Applicant is invited to amend the claims to limit the PSGL-1 antibodies and fragments thereof to those particular SEQ IDS NOS. (e.g., an entire variable heavy or light chain or all six (6) CDRs) that define the instant L31 / L32 PSGL-1-specific antibody disclosed in the specification as filed in order to obviate this rejection.

B) Pharmaceutical Compositions:

Applicant has not disclosed how to use PSGL-1-specific antibodies to treat any disease (e.g., see claim 82) or the breadth of diseases recited in claim 83 (e.g., any autoimmune disease).

There is insufficient information or nexus with respect to using PSGL-1-specific reagents to treat "diseases", commensurate in scope with the claimed invention, particularly with the predictability of treating the claimed and intended human diseases.

Pharmaceutical therapies in the absence of in vivo clinical data are unpredictable for the following reasons; (1) the protein may be inactivated before producing an effect, i.e. such as proteolytic degradation, immunological inactivation or due to an inherently short half-life of the protein; (2) the protein may not reach the target area because, i.e. the protein may not be able to cross the mucosa or the protein may be adsorbed by fluids, cells and tissues where the protein has no effect; and (3) other functional properties, known or unknown, may make the protein unsuitable for in vivo therapeutic use, i.e. such as adverse side effects prohibitive to the use of such treatment.

See page 1338, footnote 7 of Ex parte Aggarwal, 23 USPQ2d 1334 (PTO Bd. Pat App. & Inter. 1992).

In vitro and animal model studies have not correlated well with in vivo clinical trial results in patients. Since the therapeutic indices of immunosuppressive drugs biopharmaceutical drugs such as adhesion molecule inhibitors can be species- and model-dependent, it is not clear that reliance on the disclosed in vitro experimental results and the known in vivo animal studies accurately reflects the relative efficacy of the claimed pharmaceutical compositions to treat the scope of diseases encompassed and recited in the instant claims.

It is unclear from the specification whether the PSGL-1-specific antibodies can treat the breadth of diseases broadly encompassed by the claimed invention. For examples, there is insufficient direction and guidance as to whether PSGL-1-specific antibodies can treat any inflammation, autoimmune disease, infection or cancer, as broadly recited in the instant claims.

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For example, there is insufficient information whether human leukocyte-mediated inflammation would operate through other known adhesion pathways to mediate inflammatory conditions that would obviate any inhibition through a PSGL-1-mediated pathway. Therefore, the specification fails to enable the critical role or targeting PSGL-1 in inhibiting the scope of human diseases broadly encompassed by the claimed pharmaceutical compositions.

In addressing adhesion-based therapy, Harlan states that whether you go humanized antibody, peptide, soluble receptor, or saccharide; it's still a long way to product (Edgington, Biotechnology 10: 383-389, 1992; see entire document, particularly page 386, column 3, paragraph 4).

Ward et al. addresses the issues associated with selection of interventions of adhesion molecules as an approach to anti-inflammatory therapy (Therapeutic Immunol. 1: 165-171, 1994). At the current time of the article (1994), in humans there are relatively few conditions in which there is clear-cut evidence of the presence and participation of given adhesion molecules in humans (page 166, column 1, paragraph 1). Also, monoclonal antibodies are not likely to be the ultimate approach for in vivo blocking of adhesion molecules, even though they will likely provide important information (see pages 167-170, particularly Concluding Remarks).

There appears to be insufficient evidence that applicant's reliance on the ability of anti-PSGL-1 antibodies to inhibit leukocyte-mediated interactions and to treat certain conditions can be use to treat any autoimmune disease, infection, or cancer commensurate in scope with the claimed invention

Although an adhesion molecule-receptor pair may be expressed and play a role in leukocyte accumulation in various inflammatory conditions, the ability of an adhesion molecule antagonist to affect some therapeutic endpoint will depend on the adhesion molecule antagonist and the nature of the disease (e.g. acute versus chronic, tissue specificity, etc.). In humans, the claimed diseases broadly encompassed by the claimed pharmaceutical compositions are already established before therapy is offered.

McMurray et al. (Seminars in Arthritis Rheumatism 25: 215-233, 1994) discloses that the amelioration of a particular disease with a particular adhesion molecule antagonist was not predictive from one condition to another (see entire document, including Table 4). For example, L-selectin-specific antibodies have no effect on models of Sjogren's Syndrome, while decreasing incidence of diabetes in certain animal models (Table 4).

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Albelda et al. (FASEB Journal 8: 504-512, 1994) disclose that one of the most important lessons that has emerged from animal studies of CAMs is that there are distinct differences in the adhesion requirements for particular types of inflammation (pages 508-509, column 2, overlapping paragraph) and discloses the art known limitations of antibodies in treating human diseases (page 509, Therapeutic Approaches).

In view of the lack of predictability of the art to which the invention pertains the lack of established clinical protocols for effective adhesion-based therapies, undue experimentation would be required to practice the claimed pharmaceutical compositions with a reasonable expectation of success, absent a specific and detailed description in applicant's specification of how to effectively practice the claimed pharmaceutical compositions and absent working examples providing evidence which is reasonably predictive that the claimed pharmaceutical compositions are effective for inhibiting the diseases broadly recited in the instant claims.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1, 11-18, 46, 82, 83, and 85 are rejected under 35 U.S.C. § 102 (e) as anticipated by Lazarovits et al. (US 2004/0002450) (see entire document).

Lazarovits et al. teach PSGL-1-specific antibodies, including antibodies that bind sialylated and fucosylated structures that are required for binding to P-selectin and L-selectin, including the tyrosine sulfation of the amino-terminal region of PSGL-1 (see Selectins and PSGL-1 in paragraphs [0029] – [0042]).

Here, Lazarovits et al. also teach the anti-PSGL-1 antibodies KPL1, Y1 and Y17 (e.g. see Background of the Invention, including paragraph [0036] Summary of the Invention, including paragraphs [0017] and [0144; Detailed Description of the Invention, including paragraphs [0235] – [0245], [0298] -] ; anti

Applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The claimed functional limitations of "binding capabilities of an scFv of SEQ ID NO: 1", "binds to an epitope of PSGL-1", "epitope comprising at least one sulfated moiety", "binds two or more epitopes", "each epitope comprising one or more sulfated tyrosine residues", each epitope comprising at least one cluster of two or more acid amino acids", binds to the "cell types recited in claims 17".

With respect to claims 82-83, applicant is reminded that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). See MPEP 2111.02.

With respect to claim 85, applicant is reminded that the patentability of a product does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985) See MPEP 2113

It is the burden of the applicant to show the unobvious difference between the claimed and disclosed antibodies and compositions.

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Also, the Courts have held that there is no requirement that those of ordinary skill in the art know of the inherent property. See MPEP 2131.01(d) and MPEP 2112 - 2113 for case law on inherency.

14. Claims 1, 11-18, 46, 82, 83, and 85 are rejected under 35 U.S.C. § 102(b) as anticipated by McEver et al. (U.S. Patent No. 6,124,267) (see entire document)

McEver et al. teach PSGL-1-specific antibodies, including antibodies that bind sialylated and fucosylated structures that are required for binding to P-selectin, including the tyrosine sulfation of the amino-terminal region of PSGL-1 (e.g., see Example 3 on columns 28-33), (see Summary of the Invention on columns 3-4; Preparation of Diagnostic and Therapeutic Agents Derived from the Protein or Carbohydrate Components of the Glycoprotein Ligand for P-selectin and Clinical Applications on columns 11-16).

Applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The claimed functional limitations of "binding capabilities of an scFv of SEQ ID NO: 1", "binds to an epitope of PSGL-1", "epitope comprising at least one sulfated moiety", "binds two or more epitopes", "each epitope comprising one or more sulfated tyrosine residues", each epitope comprising at least one cluster of two or more acid amino acids", binds to the "cell types recited in claims 17".

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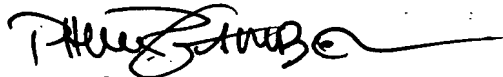
15. Given the number of USSNs filed by the inventorship, aApplicant is invited to clarify which applications should be subject to rejections under the judicially created doctrine of obviousness-type double patenting.

16. No claim is allowed.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Gambel whose telephone number is (571) 272-0844. The examiner can normally be reached Monday through Thursday from 7:30 am to 6:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841.

The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phillip Gambel, Ph.D., J.D.
Primary Examiner
Technology Center 1600
July 18, 2007